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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No. 1776-001B

First Inventor or Application Identifier Stephen D. Messer

Title Improved Transaction Tracking, Managing, Assessment, ..

Express Mail Label No. RB534726896

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:Assistant Commissioner for Patents
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1. ☒ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 13]
(preferred arrangement set forth below)
- Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
4. Oath or Declaration [Total Pages 2]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 16 completed)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting
inventor(s) named in the prior application,
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. ☒ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
13. ☒ * Small Entity Statement(s) filed in prior application, Status still proper and desired (PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
15. ☐ Other:

* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No. 09 / 098,860 Filed 6/17/98

Prior application information: Examiner Tran. T. Group / Art Unit 2761

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS☐ Customer Number or Bar Code Label

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or ☒ Correspondence address below

Name	James M. Bollinger, Esq.		
	HOPGOOD, CALIMAFDE, KALIL & JUDLOWE LLP		
Address	60 East 42nd Street		
City	New York	State	NY
Zip Code	10165		
Country	USA	Telephone	(212) 551-5000
		Fax	(212) 949-2795

Name (Print/Type)	James M. Bollinger, Esq.	Registration No. (Attorney/Agent)	32,555
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Applicant or Patentee: Stephen D. Messer Docket No. 1776-001B

Serial or Patent No.: _____

Filed or Issued: _____

For: IMPROVED TRANSACTION TRACKING, MANAGING, ASSESSMENT, AND AUDITING
DATA PROCESSING SYSTEM AND NETWORK

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c) - SMALL BUSINESS CONCERN)

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
☒ an official of the small business concern empowered to act on behalf of
the concern identified below:

NAME OF CONCERN LinkShare Corporation
ADDRESS OF CONCERN 215 Park Avenue South, New York, New York 10003

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled IMPROVED TRANSACTION TRACKING, MANAGING, ASSESSMENT, AND AUDITING DATA PROCESSING SYSTEM AND NETWORK by inventor(s) Stephen D. Messer described in

- ☒ the specification filed herewith
☐ application serial no. _____, filed _____.
☐ patent no. _____, issued _____.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)


(continued on next page)

ADDRESS _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Stephen D. Messer
TITLE OF PERSON OTHER THAN OWNER Chairman and CEO
ADDRESS OF PERSON SIGNING 215 Park Avenue South, New York, NY 10003
SIGNATURE  DATE April 20, 2008

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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IMPROVED TRANSACTION TRACKING, MANAGING, ASSESSMENT, AND AUDITING DATA PROCESSING SYSTEM AND NETWORK

Inventor

Stephen D. Messer

Field of the Invention

The present invention relates in general terms to a data processing system for integrated management of commerce as transacted on a plurality of interconnected computers. Specifically, the present invention provides for improvements and enhancements to the network computer systems previously disclosed in United States Patent Application S.N. 09/098,860, titled "Transaction Tracking And Assessment Data Processing System And Network" to the present applicant, Stephen D. Messer, and in United States Patent Number 5,991,540 issued November 23, 1999 titled "Data Processing System For Integrated Tracking And Management of Commerce Related Activities On a Public Access Network" also to the present applicant. More specifically, the present invention relates to a referral tracking and control system for promoting goods and services on a wide area, public or private access network, such as the Internet.

Statement of Related Cases

This application is a continuation-in-part of United States Patent Application S.N. 09/098,860, titled "Transaction Tracking And Assessment Data Processing System And Network" to the present applicant, Stephen D. Messer, which is a continuation-in-part of United States Patent Number 5,991,540 issued November 23, 1999 titled "Data Processing System For Integrated Tracking And Management of Commerce Related Activities On a Public Access Network" also to the present applicant. The present application incorporates the teachings of the above-mentioned application and patent as if restated herein in full.

BACKGROUND OF THE INVENTION

As discussed in more detail in the above-referenced parent cases, the present invention includes the ability to track select USER activity while on the Web including

interactions with Web pages and click-through navigation to select Web sites where purchases can be executed. Notwithstanding these advancements and advantages, commerce on the web can still be improved upon. Recognizing some of the current difficulties in implementing affiliate programs has led to the innovations presented herein.

OBJECTS AND SUMMARY OF THE PRESENT INVENTION

It is an object of the present invention to provide a data processing system for tracking, managing, and auditing select transactions between a plurality of computer workstations interconnected via a common network.

It is a further object of the present invention to provide a tool for a Merchant to see if the Content Provider is complying with terms of promotional arrangement between the parties.

It is still another object of the present invention to provide a vehicle for the detection of affiliate sponsored fraud; exemplary fraud of concern includes use of a process that employs a Javascript to artificially multiply the number of clicks, impressions and/or sales on a banner or similar promotional piece.

It is another object of the present invention to provide a system for encoding links with Merchant specific codes, *i.e.*, codes that are used by Merchants for individual tracking of customers.

It is still another object of the present invention to provide real time translation of internal link-based data transfers, *i.e.*, to map the internal code used in a prior affiliate program to the new code regimen for the current affiliate program. This is applicable for retaining and applying pre-existing coding regimens when switching to new program manager.

It is yet another object of the present invention to provide a system for tracking select data stored in link U1 data field, comprising USER and/or site information provided in name:value pairs. Two mechanisms are employed to collect data for the database. The first approach tracks USER visits using cookies to determine Web path; alternatively, incentive forms that use a promotional contest to gain voluntary input of data can be applied to collect USER/site data. Once established, closed looped marketing permits targeting of ads to particular Users based on the stored profile. Configured appropriately, this will also support single click purchases utilizing stored data on purchase requirements from the first Merchant, applicable to each subsequent Merchant visited by the USER.

It is another object of the present invention to provide a system that allows Users to control the destiny of a portion of the purchase price for a particular good or service

purchased on the Internet. A web site is provided to allow its members to donate a portion of the referral commission to the charities of their choice with each online purchase.

It is also an object of the present invention to target and track affiliate web sites with loyalty-building programs and charity sites in order to reallocate an established percentage of every transaction.

It is also an object of the present invention to provide an identifier at the end of a URL address and allow for improved data processing for tracking and managing select transactions between a plurality of computer workstations interconnected, via a common network.

In order to accomplish these and other objects, the present invention includes a data processing system designed and configured to operate on one or more servers interconnected for communication. The data processing system includes a Clearinghouse server programmed to track, manage, and audit associated transactions of Users clicking-through an Content Provider web site and purchasing a product or service from a Merchant. The Clearinghouse server is also programmed to track and report on the level of activity associated with the Users and produce, on a periodic basis, accounting statements for the participants directed to the transactions that have transpired during the defined period. The Clearinghouse server is further programmed to incorporate the use of select tagging of information to permit tracking of web site visitors and for tracking and recording the specific transactions under scrutiny. The identifier typically includes a select coded data and may take the form of a "cookie" (or similar tracking device) that is inserted onto the User's hard disk memory during access to the link. The Clearinghouse server is further programmed to provide a platform for Merchants and Content Providers to efficiently reach terms on their joint promotional and commercial efforts, and for each, to internally monitor these relationships.

The present invention also includes the use of segregated data processing system having a plurality of discrete sites individually programmed to operate in concert to monitor and track transactions between related entities and provide remuneration to the participants in accordance with a predetermined set of transaction criteria. To insure proper implementation of the promotional arrangements between parties, the system further optionally employs a web - spider that travels to select sites and downloads Content Provider page(s) to determine content. Analysis is then performed to determine if the content includes inappropriate material or subject matter inconsistent with the promotional arrangement. The system further and optionally includes fraud detection processes which

detect Javascript on the affiliate's page that automatically triggers and loops the web page linking codes, artificially creating multiple "clicks" on the promotion.

Other objects, features, and advantages of the invention shall become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings, detailed description of the specific embodiments, and the appended claims.

BRIEF DESCRIPTION OF THE FIGURES

In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

Figure 1 is a schematic block diagram providing an overview of the system;

Figure 2 is a logic flow diagram of the flow detection system;

Figure 3 is a logic flow diagram of the web page analyzer;

Figure 4 is a logic flow diagram of the commission vector subsystem; and

Figure 5 is a schematic of the variable structure.

DETAILED DESCRIPTION OF THE INVENTION

First, briefly in overview, the present invention involves the use of a data processing system having a plurality of discrete sites individually programmed to operate in concert to monitor and track transactions between related entities and provide a remuneration to the participants in accordance with a pre-determined set of transaction criteria. The system may be better understood by its use in support of transactions on the Internet.

The Internet is populated with a large number of web sites, each managed and configured to provide information to visitors browsing the web. Some web sites considered "Content Providers" (or "Site Owners" as previously described in the parent cases mentioned above), include one or more web pages having information that is of interest to USERS during a browsing session. Content Providers may become Affiliates as described in further detail below.

Referring to Figure 1, the USER typically will access the Internet via a modem connection or a local area network connection. The USER begins the process by using a web browser, such as Microsoft's Internet Explorer (tm) or Netscape Navigator(tm) to visit an Affiliate web page, block 120, such as one of the main web pages that include articles on current events, business news, sports, personal finance, etc. Importantly, the Affiliate or Site Owner includes a rich array of interesting subject matter capable of drawing substantial traffic to the site during operation. In addition, the Affiliate has allocated space among the

various web pages that can be made available for banner type ads or similar. On this web page, a banner ad (text link or icon) block 125, is displayed to the USER promoting products or services at an attractively discounted price. Finally, it is expected that the Affiliate further provides text-based or other promotional vehicles for use in advertising practice.

5 The banner ad is linked, first in a seamless fashion to the Clearinghouse server, block 130. The link then continues directly to the Merchant block 140 (as shown by inner path in Fig. 1). During the linking process, the USER has an identifier string appended to the HTTP entry, and possibly a "cookie" placed on their system. These act as a marker to permit tracking of the USER by the Clearinghouse, to determine if and when the USER was
10 involved in a purchase, and if to allocate a purchase commission to the Affiliate. The identifier used with select Affiliates include data fields for use to track select information such as a commission vector, *i.e.*, a magnitude and direction for commission dollars generated by that USER's commerce activity on the Web. This will include, perhaps, a charity wherein subsequent purchases by that USER will trigger commissions, a portion of
15 which are contributed to the charity on periodic basis. The charity – one of selectable vectors – is known as the "Target ID". In other embodiments, the USER can request that a portion of the commission be donated to a school, other individuals, or even a personal investment account as part of a coupon redeeming or "cash back" algorithm. A USER will likely return to the Affiliate since any purchases made when clicking-through the Affiliate will result in a donation to the USER's charity of choice and possibly a reduced purchase price, hence creating USER loyalty.

20 The hub of operation is the Clearinghouse server, 130 linked for interconnection and communication with the network and, in particular, any Merchants and Affiliates interested in formalizing ad programs based on the precepts of the present invention. The
25 Clearinghouse server is equipped with processing power and memory sufficient to meet the demand of multiple subscribers and click-through traffic from Affiliate promotions. In its preferred embodiments, the server is configured with a UNIX operating system. Database management software utilizing Oracle® on an Apache® Webserver is configured for the specific operating system environment. As discussed below, the Clearinghouse is further
30 equipped to deter fraud and other non-productive activity.

Finally, the Merchant server 140, is similarly linked to the network. The Merchant server is also advantageously configured with the UNIX operating system. Merchants submit text file reports back to the Clearinghouse regarding Affiliate triggered commerce. In addition, the goods are delivered to the USER.

As discussed previously, after information is received about the purchase at the Clearinghouse server, a commission determination is calculated. The commission will be a factor of several variables including the original arrangement worked out between the Merchant and the Site Owner, and the qualification of the USER in terms of access to the Merchant site, *i.e.*, whether that USER had been directed to the Merchant site by more than one banner ad before the purchase was made.

If so, a sharing or priority plan may be required. Once these terms have been implemented, final accounting for the Merchant and Affiliate is implemented including payment of commission and recording all transaction details. In this way, valuable records detailing the activity of select banners in terms of revenue are created allowing for accurate assessment of promotional impact.

On the Merchant's side, products and services are organized with identifier codes, known as sku's. The sku's assist in tracking the products for the Merchants' inventory control and the like. The database comprising product sku's is formatted and sent to the Clearinghouse for posting. When USERS interact with Affiliates and ultimately the supplying Merchants, the links trigger the placement of code including sku values on the USER command line allowing for more precise product tracking capabilities.

Merchant's may build commerce tracking links recognizable by the Clearinghouse through programming residing on the Clearinghouse server. Specifically, a URL for a product offered on the Merchant site is copied to the clipboard of the computer. A specific web page on the Clearinghouse server is then accessed and the product URL on the clipboard is "pasted" on the designated location of the page. In addition, the Merchant can copy and paste images relating to the product, or alternatively type in descriptive information in the designated fields of the Clearinghouse web page dedicated to link creation. Once the specific information is placed, the Clearinghouse server, via Javascript, Perl and/or "C" programming, generates the operative link, including all parameters necessary to implement commerce tracking. This is accomplished via a stored database on the Clearinghouse server comprising the input/output link conversion criteria for each Merchant associated with the Clearinghouse.

In operation, tracking parameters, including site ID and session ID will be encrypted. The purpose of this is to prevent extraction by unauthorized entities (web robots, search engines, etc.) of traffic, and commerce patterns of select sites. For example, the following HTTP link includes an encrypted ID:

**http://click.linksynergy.com/fs-
bin/stat?id=1Mh2Xiq9xNO&offerid=2164&ul=1234** (1)

5 Here the “**id**” is a site ID for an Affiliate, and the value is encrypted using a 128 bit
secret key algorithm and Base 64 binary to ASCII encoding, however, other encryptive
algorithms may be used. On arrival to the Clearinghouse, the system interprets the
encrypted ID and then redirects the click-through to the appropriate Merchant, retaining the
ID in encrypted format. This link is for a single variable placed in the **U1** field, and uses the
10 standard HTTP name/value pair format. The foregoing link may be modified to include
multiple subvariables, all placed in the **U2** field. This is exemplified in Equation 2:

**http://click.linksynergy.com/fs-
bin/stat?id=1Mh2Xiq9xNO&offerid=2164&ul=member%
3D1234%26page%3Dpets** (2)

15 In the foregoing HTTP statements appended to the URL, the **fs-bin** is the path; **stat**
is a program for reading the rest of the string; “?” a separator; the first **id** is the Content
Provider identifier; “**offerid**” is the Merchant offer - commission structure; and the **U1** field
20 is a name:value pair, wherein ampersands are used as separators. The **U1** string in Equation
2 above appears as name:value pairs:

member=1234&page=pets (U1)

25 During processing of the **U1** field, an escape function converts the “=” into hexadecimal
form, *i.e.*, “**%3D**” and “&” into “**%26**” of the **U1** above, generating the string as shown in
Equation 2 above. This permits processing of the subvariables in the **U1** field in accordance
with the requirements of the Content Providers - with the Clearinghouse server populating
reports with these values and reporting these back to the Content Providers at select
30 intervals. Exemplary subvariables will include member and page identifiers, and select
numerical indicia.

35 Turning now to Figure 2, a high level flow chart depicts the programming logic for
detecting click fraud. Logic begins at start block 200 and the system at block 210, pulls and
enters the next web page in sequence. With the large number of affiliate web pages makes a
sequential review perhaps too involve. Accordingly, the system may use a number of
sampling techniques, that provide some policing capability. In this way, counter variable I
increments the sampled pages and sends these to the scanning program, block 220.

At Test 230, the scanned page is examined to determine if Javascript exists within the page content. Javascript may be used to produce a click-loop process, wherein the promotion linking codes are repeatedly triggered by the Javascript commands. This would create the illusion of many clicks on the promotion by users. However, these clicks would have telltale signs, such as originating from the same IP address, identical patterns, time intervals, and the like. A positive detection branches logic to the next Test, 240 for detecting the existence of the Javascript in association with the promotion vehicle, *e.g.*, a banner ad. If this test is also positive, the system generates a report, positively identifying the page as a potential source of click fraud., block 250. Logic then continues at 260.

In addition to the Javascript detection algorithm, the system further tracks potential click fraud by assessing historical patterns of commerce. For example, if a click-through includes the same ID, the system measures the interval between successive clicks. A relatively fast click speed, or multiple clicks at a uniform interval reflects the possibility that the click is machine generated and potentially fraudulent. Other patterns may give further details, such as large jumps in traffic from individual sites.

For large scale burst traffic generated from a single or a grouped IP address, within a short interval, the apache server of the Clearinghouse is programmed to block such traffic from hitting the database of the ad servers, thus defending the Clearinghouse server from certain types of DOS (denial of service) attacks. Based on these types of detected activity, the system will create a report and trigger further and more comprehensive evaluations.

A similar process is employed in detecting content problems with web pages within the Affiliate network. This accrues when banners for select products are placed on pages with content that is antithetical to that product. To detect this, the system includes a selective download process for grabbing web pages WP(I) on some appropriate basis, block 210. At block 220, the system pulls a library of keywords that are of particular concern for the product associated with that web page. This may be words associated with heart disease for products such as steaks or cigarettes.

Continuing with Figure 3, the system then scans the web page WP(I) and creates a comparator file from the scanning, block 330. This is then compared to the library of keywords, Test 340 with the positive matches branching logic to block 350, storing the matched keyword. The system then generates a report regarding the match, block 360 and continues the process for the next page and library, block 370.

The allocation of commission dollars to charity may be done via several methods, including a USER and/or site basis. The USER enters a Merchant or Content Provider site and completes a form designating that future purchases made by that USER will trigger

commissions payable to a specified target, *e.g.*, a charitable organization such as the American Cancer Society or "ACS". Once completed, the form is entered into a database stored locally or at the Clearinghouse server. An identifier is then used to detect subsequent commerce by that USER and, once detected, to allocate the commission to the designated recipient, *e.g.*, ACS. The designation of the target is made in one of the subvariables of the U1 field.

Alternatively, the Content Provider site and/or Merchant site may have local coding that automatically triggers a commission vector to designated recipients, *viz.*, USER commerce, independent of USER data entry. For example, a web page may promote itself as a purchase site for select items stating that all purchases made on that site will incur a commission vector to a selected entity, such as a school. In this way, the University of Nebraska may include a Merchant web page where purchases by USERS trigger the commission vector depositing funds into the school's bank account.

This is exemplified in Figure 4. The process starts at block 400, and USER(ID) is tracked, via mechanisms previously discussed herein, to detect purchases that generate a commission CP(ID), block 410. Test 420 determines if the transaction is governed by any contribution program and if the USER is a member; if so, logic branches to block 430 and the system loads the proper commission vector parameters, Prog(ID). The purchase details are loaded, block 440, and the system allocates the commission vector block 450.

In either event, the purchase commission is stored, block 460 and the system increments to the next USER-transaction.

Turning now to Figure 5, a schematic of the levels of coding is provided for the select fields associated with the HTTP command line entry for the link. Level one depicts the three variables, including the U1 field. In accordance with the present invention, the U1 field is populated with sub variables, separated by markers so that the parsing program registers the beginning and end of each subvariable in the U1 field.

As discussed previously, the Merchant will submit information regarding commerce to the Clearinghouse server utilizing a Merchant text file. Select processing characteristics are transferred for implementation, via this Merchant file in a field known as the M1 field within the file. For example, the M1 field may report purchases from first time USERS under a commission structure that rewards the Content Providers for referrals of new customers at a higher rate than repeat customers. This provision is included in the M1 field and used by the Clearinghouse to administer the reporting of commissions to the Content Providers.

What is claimed is:

1. A data processing system for supporting web based commerce and commission tracking on a multi-node network, comprising:
web access and scanning code for selectively downloading web pages and examining web page content to determine whether the content thereon is appropriate for products promoted on said web page.

2. The system of claim 1 wherein said code includes comparator means for determining if said content includes terms that are antithetical to products promoted or to be promoted on said web page.

3. A data processing system for supporting web-based commerce and commission tracking on a multi-node network comprising:

- a. Content Provider for displaying promotions;
- b. Clearinghouse server in communication with said Content Provider for parsing HTTP commands received therefrom, including a U1 field comprising plural subvariables; and
- c. a Merchant site interconnected to said Clearinghouse server.

4. The system of claim 3 further comprising programming for managing a commission vector process wherein target commission recipients are identified as a subvariable in said U1 field.

5. The system of claim 3 further comprising programming on said Merchant site for sending a file to said Clearinghouse server comprising information on commerce at said Merchant site.

6. A data processing system for supporting web-based commerce and commission tracking on a multi-node network, comprising:

- a. Content Providers with web pages wherein said web pages include linking instructions associated with select promotions;
- b. Clearinghouse server for tracking USER interactions with said promotions, said Clearinghouse server further comprising programming for detecting fraudulent activity relating to said promotions; and

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c. Merchant sites interconnected to said network and available for providing goods and/or services to USERS referred to said Merchant site by said linking instructions.

7. The system of claim 6 wherein said fraud detection programming includes click pattern assessment over time.

8. The system of claim 6 wherein said fraud detection programming includes Javascript detection.

9. The system of claim 7 wherein said programming tracks time intervals between clicks from a select promotion.

10. The system of claim 7 wherein said programming detects repeated clicks from a single IP address.

ABSTRACT OF INVENTION

An improved processing system for tracking commerce on the Internet provides for subvariable processing and includes web page scanning to discern fraud or improper content to insure proper promotion of select products within the network environment.

FIG. 1

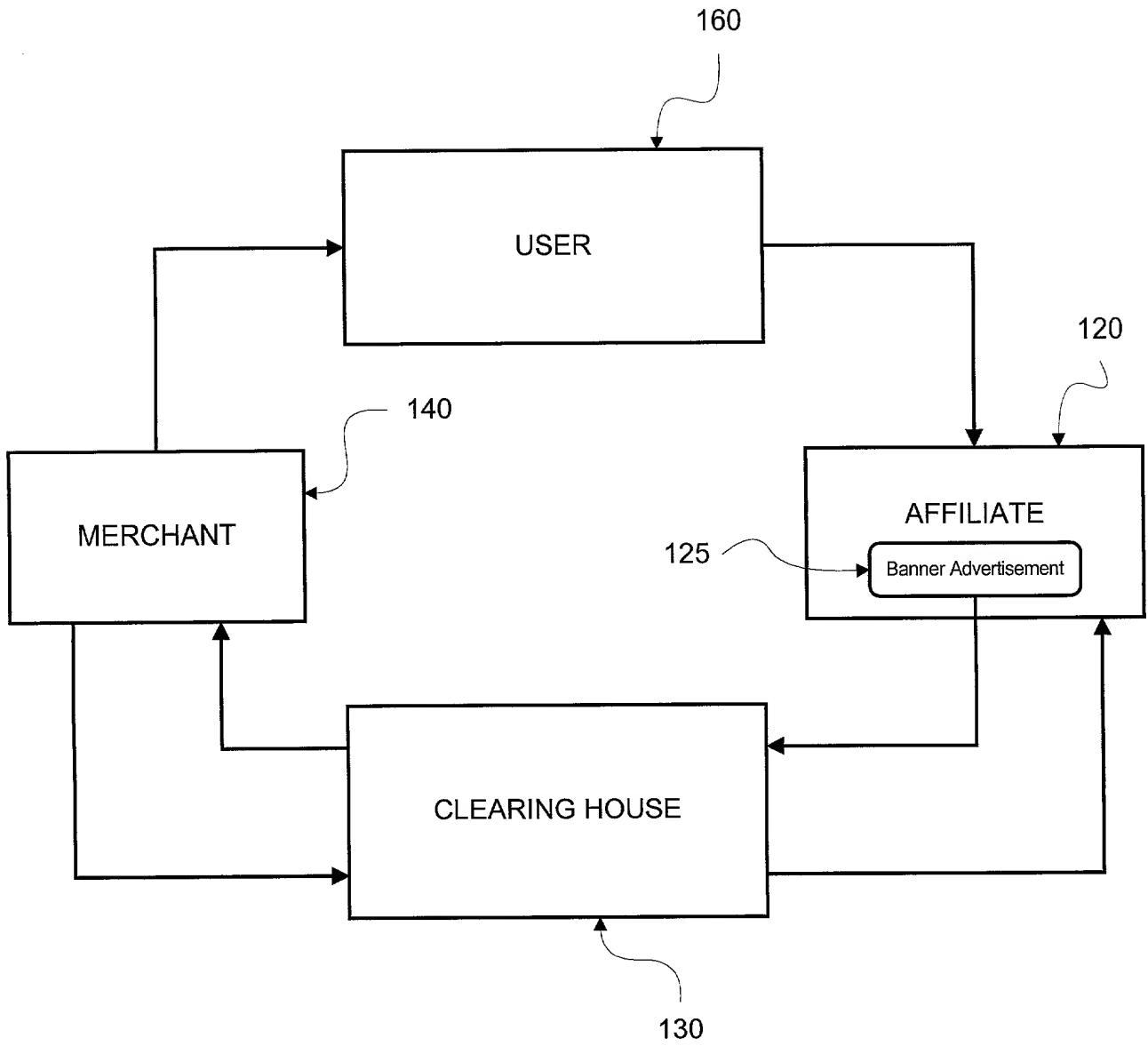


FIG. 2

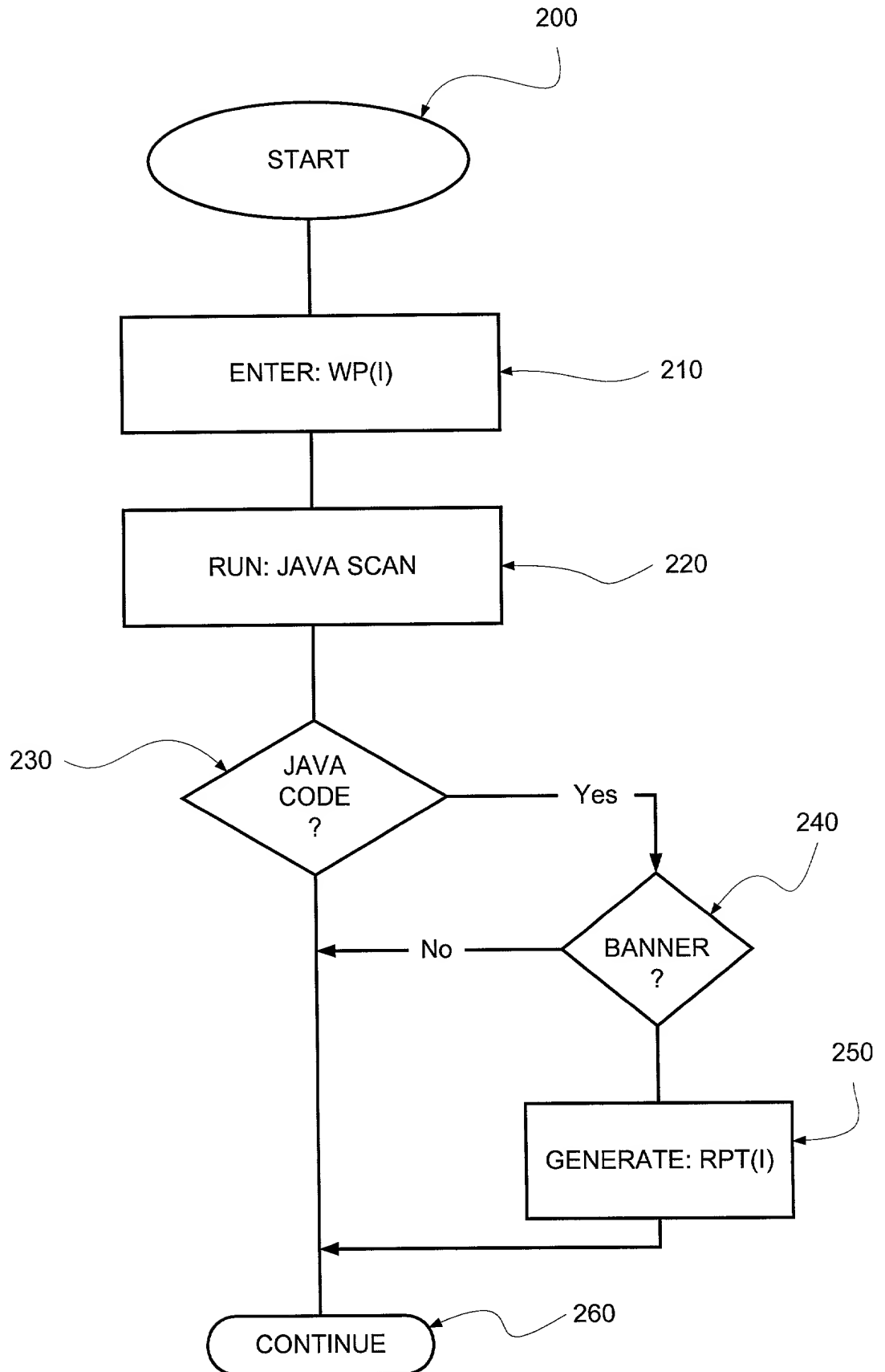


FIG. 3

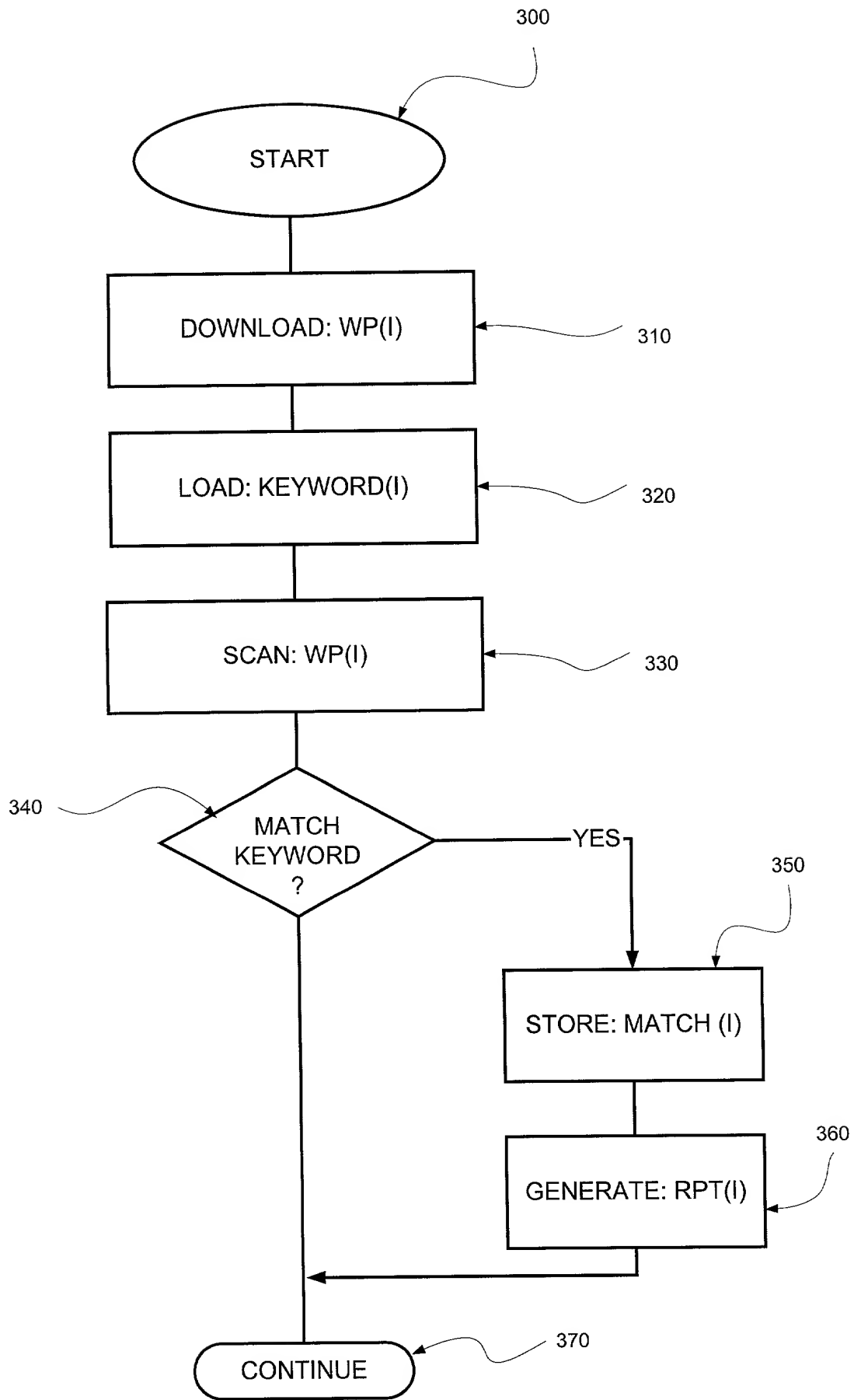


FIG. 4

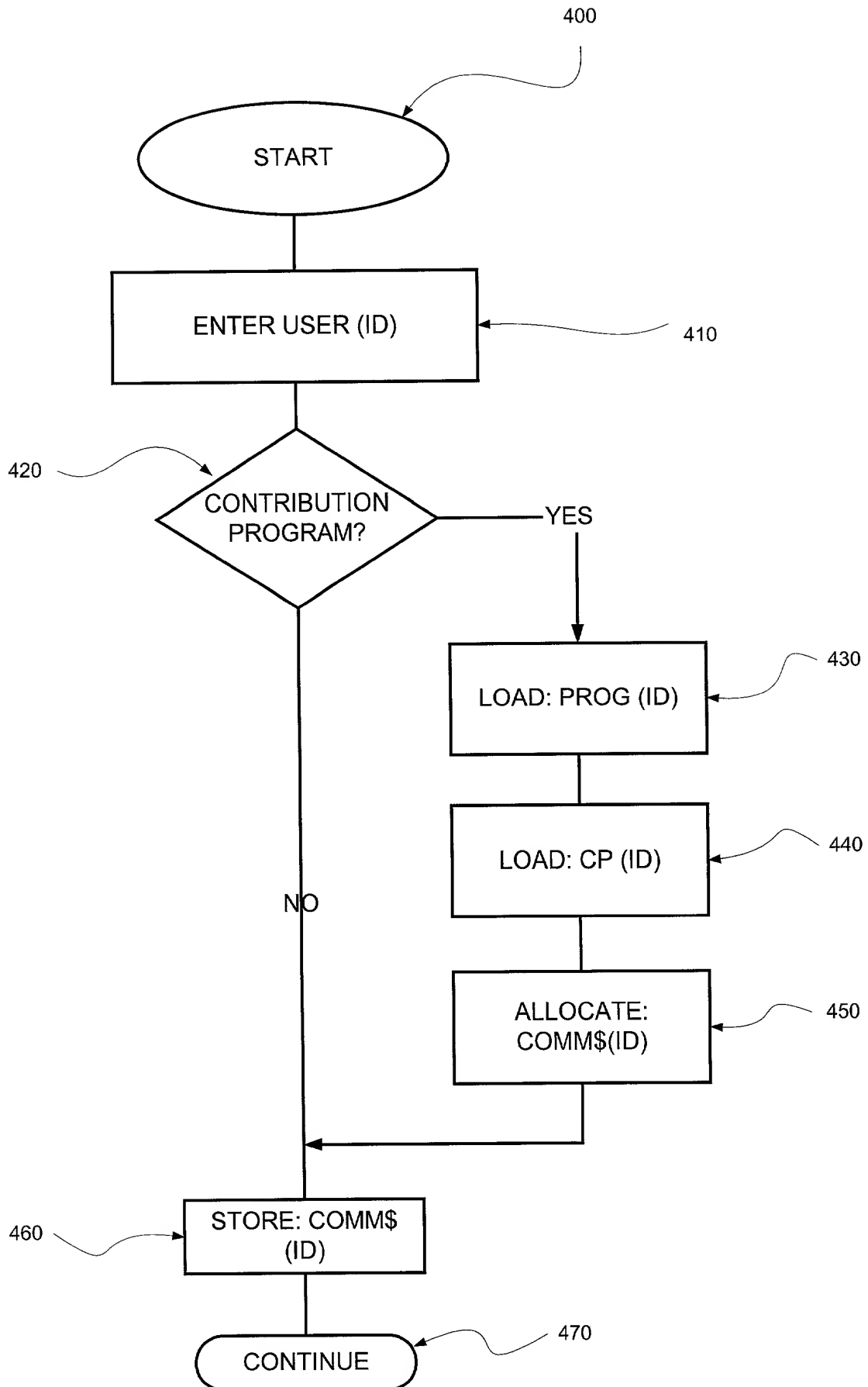
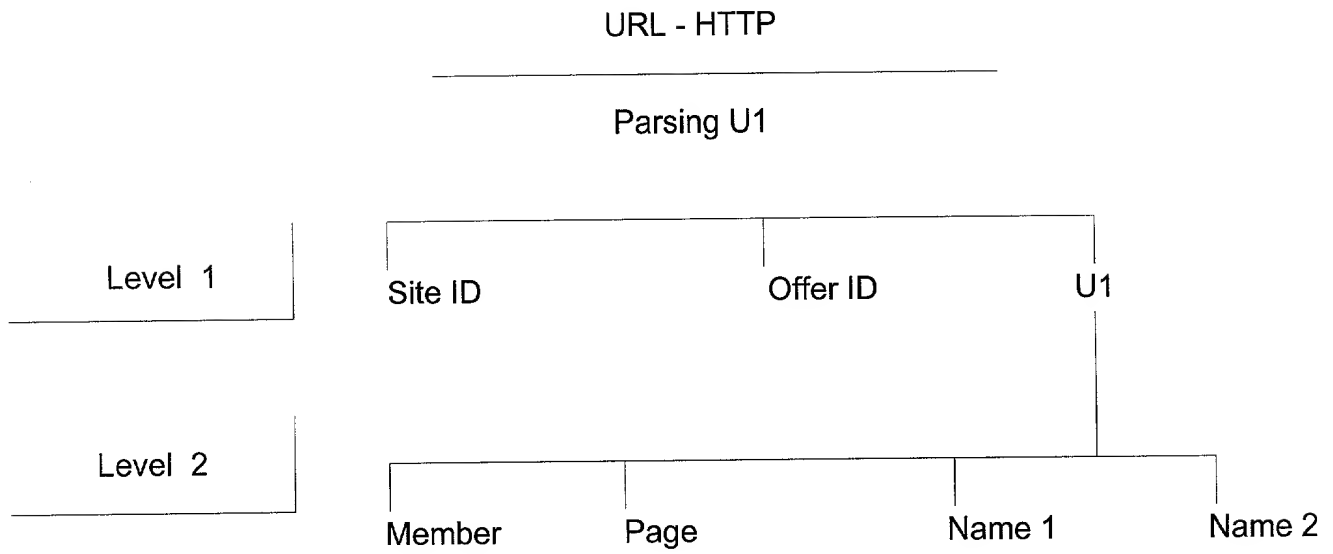


FIG. 5



003240-9923550

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am an original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **IMPROVED TRANSACTION TRACKING, MANAGING, ASSESSMENT, AND AUDITING DATA PROCESSING SYSTEM AND NETWORK**, the specification of which

☒ is attached hereto.
☐ was filed on _____ as
Application Serial No. _____
and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below, and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>09/098,860</u> (Serial No.)	<u>06/17/98</u> (Filing Date)	<u>Pending</u> (Status)
<u>08/871,921</u> (Serial No.)	<u>06/10/97</u> (Filing Date)	<u>Granted</u> (Status)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, HOPGOOD, CALIMAFDE, KALIL & JUDLOWE LLP, a firm consisting of Roy C. Hopgood, Reg. No. 15,245; John M. Calimafde, Reg. No. 16,895; Eugene J. Kalil, Reg. No. 16,686; Stephen B. Judlowe, Reg. No. 21,049; Francis J. Murphy, Reg. No. 24,537; Dennis J. Mondolino, Reg. No. 27,148; Ira B. Winkler, Reg. No. 29,223; James M. Bollinger, Reg. No. 32,555; Brian P. Murphy, Reg. No. 34,986, and Bradley N. Ruben, Reg. No. 32,058 at that firm.

(continued on next page)

SEND CORRESPONDENCE TO:

James M. Bollinger, Esq.
Registration No. 32,555
HOPGOOD, CALIMAFDE, KALIL
& JUDLOWE LLP
60 East 42nd Street
New York, New York 10165

DIRECT TELEPHONE CALLS TO:

James Bollinger
(212) 551-5000

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor Stephen Dale Messer
Inventor's signature [Signature] Date April 18, 2000
Residence New York, New York
Citizenship U.S.
Post Office Address 95 Horatio St., Apt. 107, New York, NY 10014

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